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Monthly Statistical Report

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JUNE 1988

SUMMARY

In 1988's first half, deliveries continued to rise, domestic production continued to fall, and imports continued to grow— trends which, with some variations, have persisted since the major oil price decline of 1986.

First half deliveries rose 2.5 percent, slightly more than 1987's 2.4 percent rise. This was mainly the result of residual fuel oil's seesawing demand over the past several years. Residual fuel oil deliveries jumped ahead in 1986 with lower oil prices, fell back last year as oil prices rose and natural gas prices slipped, and increased again in this year's first half by almost 7 percent.

Growth in deliveries of all products other than residual fuel oil, however, slowed to 2.1 percent in the first half from 1987's annual 3.6 percent increase. One factor contributing to this was slower growth in gasoline deliveries, though, in light of other consumption indicators, it is not clear that underlying growth in gasoline consumption has actually slackened.

For other products, increases in transportation use continued to be the principal source of growth for distillates, while less rapid growth in air traffic helped to slow kerosine jet fuel's rate of increase compared with that of 1987. Growth in the deliveries of "other oils" also slowed, rising 1.0 percent in the first half compared with 4.3 percent for all of last year.

With crude oil prices averaging more than 10 percent lower than for last year's first six months, first half crude oil

production outside Alaska has fallen 870 thousand B/D since the same period two years ago—the most rapid two-year decline ever. Gains in Alaskan production, stemming from the coming on stream of the offshore Endicott field late last year and from other projects begun years earlier and completed in the past two years, have provided a partial offset to the lower 48's decline. However, despite the almost 150 thousand B/D increase in Alaskan production over the past two years, the decline in U.S. production as a whole has still amounted to 728 thousand B/D.

Imports jumped over 14 percent in this year's first half, more than twice the rate of increase in 1987. Though a significant portion of this year's rise represents a shift in inventory patterns, growing demand and falling domestic production have kept the underlying trend in imports heading upwards. If adjusted for inventory movements, imports in the first half of 1988 would be roughly 1.8 million B/D higher than for the same period three years ago; the actual increase was well over 2 million B/D.

Growing demand and improved refinery margins helped refinery utilization to reach an average 83.8 percent of operable capacity in the first half, the highest January-to-June rate in nearly a decade. A significant portion of the high level of imports went towards increasing inventories during the first half by 10 million barrels—in contrast with an average historical decline of about 40 million B/D.

PRODUCT SUPPLIED ^{1/}

Gasoline

SLOWDOWN IN FIRST-HALF GROWTH.

The rate of growth in gasoline deliveries in this year's first half slowed to 1.6 percent from 2.4 percent for all of last year, a somewhat puzzling development in light of other indicators which suggest little if any slowdown in consumption.

Although difficult to believe, it may well be that the boost in demand expected from a price drop such as that which occurred in 1986 may by now have played itself out—and retail prices, though experiencing some variability as a result of fluctuating crude oil prices, have averaged roughly the same as a year ago for much of the past six months. But more rapid growth in income this year can also be expected to have had a

positive effect on demand growth. Real disposable income, which had risen 1.2 percent in 1987, has been rising at about a 2.8 percent year-to-year rate so far in 1988.

API ESTIMATES

	JUNE		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	16.7	(1.0)	16.9	2.3
Crude oil production ^{2/}	8.2	(0.9)	8.2	(2.3)
Total imports ^{3/}	7.0	4.6	6.9	14.1
Stocks (million bbl) ^{3/}	1,078	3.5	na	na

If the net result of these factors were a slackening in the rate of growth of gasoline consumption, it is not borne out by the evidence from vehicle travel. Available data on miles traveled so far this year show a 3.6 percent increase, only slightly less than last year's annual 3.8 percent increase. However, it may be that the increase in gasoline demand that resulted from higher speed limits in the latter part of 1987 and early 1988 is no longer affecting the rate of growth. Thus, it is not clear at this point that the slowdown in deliveries for the first half really represents a slowdown in consumption. June's deliveries, however, rose 1.6 percent from last year, indicating that much of the earlier drawdown of secondary and tertiary stocks that may have occurred, ended when primary stocks dropped substantially in mid-month.

Unleaded's market share surpassed 80 percent for the first time during the first half of 1988, marking off more than a decade during which the shares of leaded and unleaded were reversed. With help from midgrade unleaded, which has replaced leaded regular for some marketers in some areas, unleaded's share rose another 6 percentage points in the first half, year to year, after a strong, 7 percentage point gain in 1987, and by June had reached 81.5 percent.

Distillates

TRANSPORTATION LEADS STRONG FIRST HALF.

Transportation continued to be the main growth sector for distillate fuel oil in the first half of 1988, accounting for perhaps 75 thousand B/D of the 123 thousand B/D (4.1 percent) increase over the same period last year. Demand for truck transportation has risen in response to the economy's relative strength in the first half, and traffic has increased an estimated 6 percent so far this year. Rail traffic is up over 8 percent, with notable increases for coal and for export-related shipments of grain.

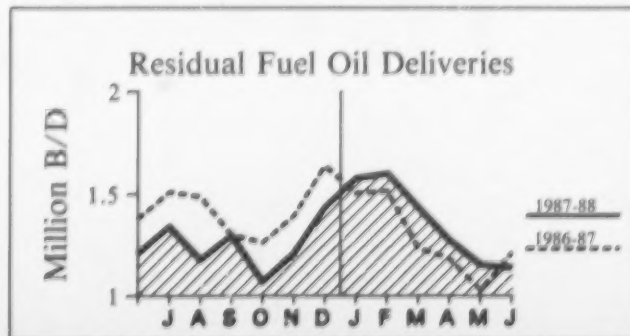
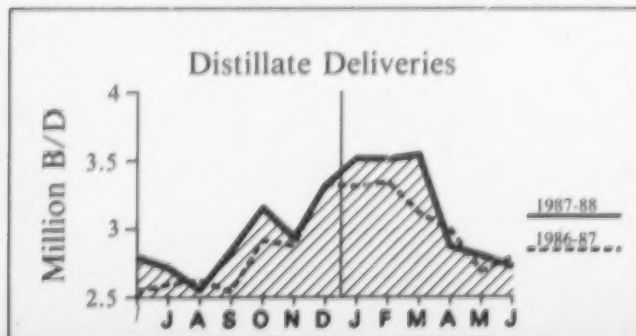
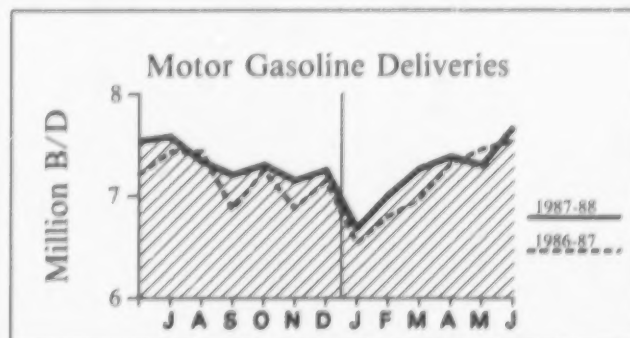
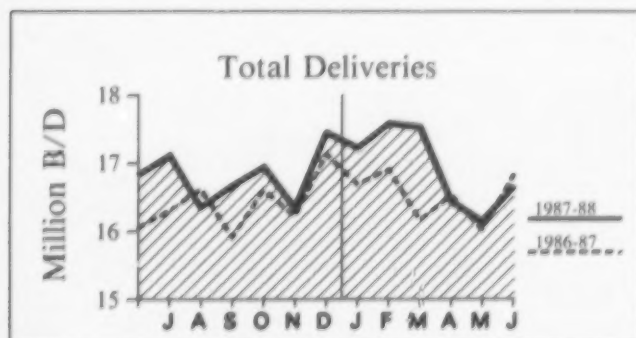
Residential and commercial demand is also estimated to have been slightly higher so far this year than in the first half of 1987, but due mainly to colder weather during the main part of the heating season rather than to any significant change in its share in the market for heating fuels. With a small increase in the industrial sector and little change for farm, off-highway, or other uses, it appears that underlying growth in consumption, excluding temporary weather effects, has been on the order of 3 to 3.5 percent.

Residual Fuel Oil

STRONG FIRST-HALF DELIVERIES.

Residual fuel oil deliveries during the first half of the year are estimated to be 1,364 thousand B/D, up 6.9 percent from the first half of 1987. Heavy fuel oil benefited from both low prices and the continuing expansion of export-led sectors of the economy. However, the 5.8 percent decline in the June estimate from last year points to a possible reversal of the year-to-year increases that have characterized heavy fuel oil deliveries since the beginning of the year.

The industrial sector is believed to have been responsible for much of the year-to-year semi-annual increase in residual fuel oil deliveries. The June estimates, however, suggest that interruptible spot natural gas supplies are capturing larger parts of the large-industrial user market. Despite depressed gas prices during much of the last six months, heavy fuel oil was also able to have retained much of its market share of the electric utility market because of the fuel's relative competitiveness. More recent signs, however, point to a small but growing displacement of small quantities of residual fuel oil by natural gas in this sector as well. Both the increase in the availability of spot gas and the continuing decline in its price have apparently begun to invite fuel-switching to gas by some electric utilities, accounting for part of the year-to-year decline in the June deliveries estimate.



Bunker fuel deliveries during the first six months are believed to have increased substantially over 1987. The drought, however, is also reported to have diverted bunker fuel shipments from the Midwest to the Gulf as well as contribute to the apparent decline in the heavy fuel oil market. West coast bunker fuel deliveries have also reportedly been under recent pressure from more competitive Far East sources.

Kerosine Jet Fuel

SLOWDOWN IN FIRST-HALF INCREASE.

Shifts in the pattern of air traffic, particularly slower growth for passenger travel, are at least partly responsible for reducing kerosine jet fuel deliveries' year-to-date growth rate to half that of 1987. For the first six months of this year, kerosine jet fuel deliveries rose 4.1 percent, compared with nearly 7 percent for all of last year.

Much of this year's increase in traffic has been in the international passenger and air cargo sectors, both continuing the strong growth of 1987. Revenue passenger miles on international flights are up roughly 20 percent for the year to date, and cargo ton miles about 15 percent. Growth in domestic passenger miles, however, which accounts for the bulk of air traffic, has been flat so far in 1988, following a 7 percent rise last year. The net result of these traffic patterns has been an estimated increase in miles flown of about 5 percent, down from last year's 8 percent and 1986's 12 percent.

Other Oils

SLIGHT FIRST-HALF INCREASE.

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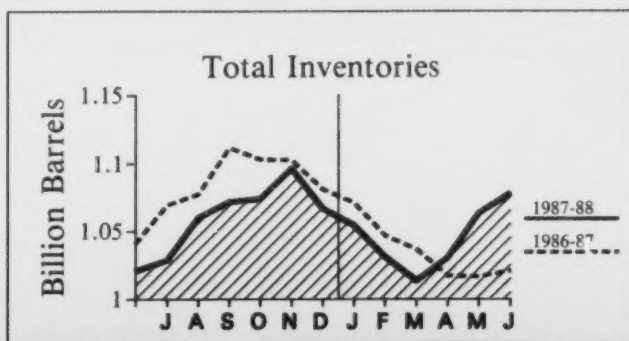
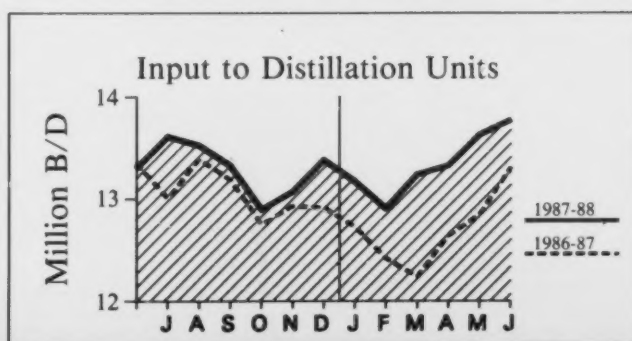
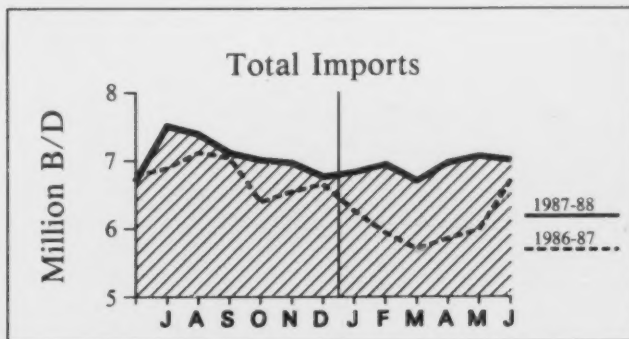
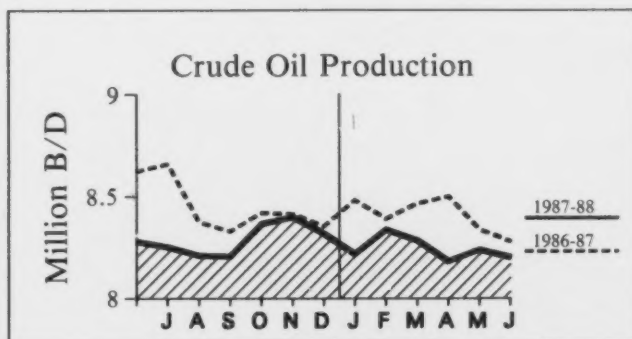
For the first half of 1988, deliveries of other oils were estimated to be 3,994 thousand B/D, representing an increase of 1.0 percent over the same

period in 1987. Much of the year-to-year increase took place during the first quarter. But the second quarter decline, estimated to be 2.7 percent, was more the result of unusually high export-led petrochemical demand in the second quarter of 1987 than any current weakness in demand. In fact, olefin plants have been running close to capacity for the entire first half of this year.

First-half increases were recorded in most of the individual products in the other oils category. Areas of particular strength have been liquid petroleum gases and still gas. LPG's were estimated to have grown by over 4 percent. During the period, there has been a significant shift from propane to ethane as the preferred ethylene feedstock, with purity ethane commanding a premium. During June, however, propane demand for crop-drying purposes has also been hampered by a decline in agricultural yields as a result of the drought. In the last few months, naphtha and gasoil have become more competitive with propane as petrochemical plants have approached full capacity.

The robust year-to-year increase in still gas production and consumption, which is estimated to be over 8 percent, is consistent with the substantial increases in refinery runs during the same period. This pattern of year-to-year increases in refinery gas is believed to be the largest source of first-half growth in this category.

Asphalt and road oil were the exceptions to this pattern: they are estimated to have declined by approximately 8 percent over the first half of 1987. Unusually cold and wet weather in several parts of the country are reported to have depressed deliveries during the first quarter. The current drought, which has been affecting barge traffic in the Midwest, is believed to have hampered asphalt and road oil deliveries from the Gulf to the upper part of the Midwest.



SUPPLY ^{1/}

Production

CONTINUED DECLINE IN FIRST HALF.

With crude oil prices averaging more than 10 percent lower than a year ago—and more than 40 percent lower than before the 1986 price drop—domestic crude oil production continued to decline in the first half of 1988. In the lower 48, where production before 1986 had been stable or even rising slightly, first half 1988 production declined 261 thousand B/D from 1987. From two years ago the decline has amounted to 870 thousand B/D. This was the largest drop for any two-year period. Partially mitigating this decline has been a slow but steady increase in Alaskan production as a result of projects initiated many years ago coming onstream in the past two years, such as the offshore Endicott field which began producing late last year. Since the first half of 1986, Alaskan production has risen by almost 150 thousand B/D, holding the decline for the U.S. as a whole to 728 thousand B/D in this year's first half versus two years earlier.

Compared with a year ago, lower 48 production was down 133 thousand B/D or 2.1 percent for June. Production in Alaska was roughly 55 thousand B/D higher, yielding a net decline for the U.S. as a whole of 78 thousand B/D or 0.9 percent.

Imports

STRONG FIRST-HALF INCREASE.

First half imports rose almost 900 thousand B/D or 14 percent from a year ago, nearly twice as large as last year's annual increase. However, roughly half of this year's increase reflects differences in inventory behavior between the two periods, particularly a stock change this year 50 million barrels greater than the historical average. If adjusted for inventory changes, imports would still be about half a million B/D higher than for the same period a year ago—or more than 1.8 million B/D above those of three years ago, before the 1986 price decline that encouraged consumption while discouraging domestic production. The actual increase in imports since the first half of 1985 has been even larger—well over 2 million B/D. Roughly 40 percent of the increased need for imports over the past three years was the result of declining domestic production, while the remainder was mainly due to growth in deliveries.

First half crude oil imports alone increased almost 750 thousand B/D, while product imports rose over 100 thousand B/D.

Higher deliveries of residual fuel oil helped to increase imports of that product by about 17 thousand B/D; LPG imports also rose close to 50 thousand B/D, up from lower-than-typical levels last year. Imports of gasoline and components declined slightly while imports of distillate, due to strength during the heating season, were slightly higher.

Refinery Operations

UTILIZATION REACHES NINE-YEAR HIGH.

In the past three years, refinery input has risen more than 1 million B/D, in step with the increase in deliveries. This year's continued growth in deliveries helped to bring refinery utilization up to an average 83.8 percent of operable capacity in the first half of 1988—the highest rate for a similar period since 1979. Excluding idle capacity classified as "operable", year-to-date utilization of capacity in current operation averaged about 90 percent, a recent-year record for the first half of the year. Though high by recent historical standards, this still falls slightly short of a similarly calculated historical high of about 92 percent for the same period in 1977.

As with the first six months as a whole, June's refinery activity was strong, with input to distillation units up by 3.5 percent compared with last June. While in recent months, year-to-year gains in distillate output had been greater than that for gasoline, in June this pattern was reversed.

Inventories

CONTINUED RISE IN TOTAL STOCKS.

Continued high import levels helped to raise inventories another 15 million barrels in June. Though June's increase put the rise in stocks for the first half of 1988 at only about 10 million barrels, this contrasts sharply with an average decline of 40 million barrels during the same period in recent years. Crude oil inventories remained near the top of their 315-365 million barrel range of the past several years.

For June, gasoline stocks declined by 15 million barrels while distillate stocks rose 10 million barrels. The role of seasonal inventories in meeting gasoline demand during the summer peak period has typically been a small one. In fact, June-through-August deliveries have averaged only about 4 percent higher than the annual average in recent years. Thus, it is not surprising that during three of the past five summers, gasoline inventories have actually risen slightly during the period.

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- 1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.
 - 2/ Includes lease condensate.
 - 3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 550 million barrels as of June 30, 1988).

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	JUNE			YEAR-TO-DATE		
	1988 ¹	1987 ²	% Change	1988 ^{3R}	1987 ²	% Change
Products Supplied:						
Total motor gasoline	7,661	7,539	1.6	7,214	7,103	1.6
Finished leaded motor gasoline*	1,417	1,861	(23.9)	1,397	1,813	(22.9)
Finished unleaded motor gasoline*	6,244	5,678	10.0	5,817	5,290	10.0
Naphtha-jet	203	233	(12.9)	207	198	4.5
Kerosine-jet	1,175	1,127	4.3	1,210	1,162	4.1
Distillate fuel oil	2,719	2,790	(2.5)	3,159	3,036	4.1
Residual fuel oil	1,137	1,207	(5.8)	1,364	1,276	6.9
All other oils ⁴	3,955	4,141	(4.5)	3,994	3,954	1.0
Reclassified ⁵	- 196	- 207	(5.3)	- 219	- 214	2.3
Total domestic products supplied	16,654	16,830	(1.0)	16,929	16,515	2.5
Exports	760	669	13.6	815	764	6.7
Total products supplied	17,414	17,499	(0.5)	17,744	17,279	2.7
Supply:						
Domestic production:						
Crude oil ⁶	8,201	8,279	(0.9)	8,212	8,408	(2.3)
Natural gas liquids	1,600	1,578	1.4	1,601	1,592	0.6
Other supply ⁷	1,087	1,076	1.0	1,061	873	21.5
Total domestic supply	10,888	10,933	(0.4)	10,874	10,873	-
Imports:						
Crude oil, total	5,140 ^{10/}	4,743 ^{10/}	8.4	4,893 ^{10/}	4,147 ^{10/}	18.0
Canadian	720	680	5.9	678	601	12.8
Other	4,420	4,063	8.8	4,215	3,546	18.9
Products, total	1,874	1,962	(4.5)	2,038	1,927	5.8
Residual fuel oil	393	481	(18.3)	581	564	3.0
Other	1,481	1,481	-	1,457	1,363	6.9
Total imports	7,014	6,705	4.6	6,931	6,074	14.1
Total supply	17,902	17,638	1.5	17,805	16,947	5.1
Stock change, all oils	+ 488	+ 139	XXXX	+ 61	- 332	XXXX
Refinery Operations						
Input to crude oil distillation units	13,774	13,306	3.5	13,346	12,697	5.1
Operable capacity	16,016	15,588	2.7	15,930	15,565	2.3
Refinery utilization (%) ⁸	86.0%	85.4%	0.7	83.8%	81.6%	2.7
Crude oil runs	13,563	13,202	2.7	13,156	12,552	4.8
Stocks (millions bbls.)	1988			1987 ²	% Change from ...	
	June 30 ⁹	May 31 ⁹		June 30	Previous Month	Year Ago
Crude oil	358.8	361.3 ^{R/}		327.6	(0.7)	9.5
Unfinished oils	111.6	109.8 ^{R/}		102.4	1.6	9.0
Total motor gasoline**	209.7	224.3 ^{R/}		230.4	(6.5)	(9.0)
Finished leaded motor gasoline*	42.7	45.0		55.6	(5.1)	(23.2)
Finished unleaded motor gasoline*	132.1	143.4		136.9	(7.9)	(3.5)
Naphtha-jet	6.7	6.5		7.3	3.1	(8.2)
Kerosine-jet	38.8	38.3		38.7	1.3	0.3
Distillate fuel oil	111.3	101.6 ^{R/}		104.4	9.5	6.6
Residual fuel oil	41.1	42.5 ^{R/}		41.4	(3.3)	(0.7)
All other oils	199.8	178.8 ^{R/}		168.6	11.7	18.5
Total all oils	1,077.8	1,063.1 ^{R/}		1,020.8	1.4	5.6

1/ Based on API estimated data converted to a monthly basis.

2/ Source: U.S. Department of Energy.

3/ Source: January-April, U.S. Department of Energy, May-June, API.

4/ Includes crude losses.

5/ Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be no double counting of these volumes, they are subtracted from total domestic products supplied.

6/ Includes lease condensate.

7/ Includes Unaccounted-for crude oil, Refinery input of other hydrocarbons, and Processing gain.

8/ Represents "Input to crude oil distillation units" as a percent of "Operable capacity."

9/ Derived by interpolating API weekly stocks data.

10/ Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.

R/ Revised.

* Included in motor gasoline.

** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.

ESTIMATED UNITED STATES PETROLEUM BALANCE

(Daily Average in Thousands of 42 Gallon Barrels)

Products Supplied/Supply From Primary Storage	2nd QUARTER		
	1988 ¹	1987 ²	% Change
Products Supplied:			
Total motor gasoline	7,446	7,438	0.1
Finished leaded motor gasoline*	1,416	1,887	(25.0)
Finished unleaded motor gasoline*	6,030	5,551	8.6
Naphtha-jet	212	207	2.4
Kerosine-jet	1,144	1,130	1.2
Distillate fuel oil	2,795	2,820	(0.9)
Residual fuel oil	1,191	1,138	4.7
All other oils ³	3,828	3,935	(2.7)
Reclassified ⁴	- 200	- 212	(5.7)
Total domestic products supplied	16,416	16,456	(0.2)
Exports	764	734	4.1
Total products supplied	17,180	17,190	(0.1)
Supply:			
Domestic production:			
Crude oil ⁵	8,207	8,371	(2.0)
Natural gas liquids	1,604	1,584	1.3
Other supply ⁶	1,042	882	18.1
Total domestic supply	10,853	10,837	0.1
Imports:			
Crude oil, total	5,132 ^{9/}	4,35 ^{9/}	17.9
Canadian	697	656	6.3
Other	4,435	3,698	19.9
Products, total	1,905	1,824	4.4
Residual fuel oil	451	487	(7.4)
Other	1,454	1,337	8.8
Total imports	7,037	6,178	13.9
Total supply	17,890	17,015	5.1
Stock change, all oils	+ 710	- 175	XXXX
Refinery Operations			
Input to crude oil distillation units	13,580	12,929	5.0
Operable capacity	15,965	15,573	2.5
Refinery utilization (%) ⁷	85.1%	83.0%	2.5
Crude oil runs	13,387	12,787	4.7
Stocks (millions bbls.)	2nd QUARTER		
	1988 ⁸	1987 ²	% Change
Crude oil ^{9/}	358.8	327.6	9.5
Unfinished oils	111.6	102.4	9.0
Total motor gasoline**	209.7 [*]	230.4	(9.0)
Finished leaded motor gasoline*	42.7	55.6	(23.2)
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2/ Source: U.S. Department of Energy.

3/ Includes crude losses.

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* Included in motor gasoline.

** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.